

## BACKGROUND

- The community pharmacist not only fills and verifies prescriptions, but also administers vaccines, manages technicians, runs a business, and makes recommendations for products outside of the pharmacy.
- New medications and safety guidelines constantly change making it difficult for community pharmacists to keep up with the newest information.
- Additional resources might be helpful in assisting pharmacists in staying up to date with the guidelines pertaining to commonly stocked OTC medications that are available to their pharmacy patients.

## OBJECTIVE

- To determine if additional resources are needed to keep community pharmacists up to date with OTC medication guidelines so that they feel more comfortable and confident recommending these products to patients.
- This study focused on special populations of patients such as **pregnant** patients and **children**, thus assuring the most vulnerable patients can safely acquire medications over the counter with pharmacist assistance.

## METHODS

### Study Design

- Survey-based, cross-sectional study conducted amongst pharmacists who are currently practicing, or have practiced in the past, in a community pharmacy setting.
- 178 surveys collected

### Inclusion Criteria

- Community Pharmacist
- Completed full survey
- Currently practicing (required for all but final secondary variable)

### Outcomes of the Study

- Primary: percentage of cases answered correctly in the survey and the perceived safety of recommendations made.
- Secondary: percentage of responses recoded versus years practiced, mean score on the quiz and how it varied according to years practiced (0-5, 6-10, 11-20, 20+ years), level of comfort in recommending OTC medications and how many products the pharmacist recommends weekly, percentage of correct answers on each question and how it varied between the two special populations: pregnancy and childhood, and what makes pharmacists uncomfortable when recommending OTC medications.

### Data Collection Method

- Survey crafted with Qualtrics and distributed through email and by posting on a Pharmacist Facebook group page.
- Survey completely voluntary and anonymous. No information collected about which pharmacy responder works for.
- To meet power and obtain a 95% confidence level with less than a 10% margin of error, a sample size of at least 96 was deemed necessary based on the amount of community pharmacists currently estimated to be practicing in the United States.

### Data Analysis

- Only fully completed surveys were used for analysis. 178 surveys were submitted, 146 were fully completed, and 104 were submitted by currently practicing community pharmacists.
- Data analyzed using descriptive statistics such as mean and standard deviation.

## SURVEY

1. A woman approaches the counter looking for a recommendation for something that she can take safely for a runny nose while pregnant. She brings four options to the counter. Which of these products would you recommend for stuffy nose while pregnant?

A. Sudafed Pe  
B. Guaifenesin  
C. Chlorpheniramine  
D. Fexofenadine  
E. I do not know

2. A gentleman approaches the counter looking for a recommendation for his four-year-old who is experiencing typical cold-like symptoms. He brings four options to the counter. Which of these products would you recommend for a cold for a four-year-old?

A. Children's Mucinex  
B. Zyrtec D  
C. Afrin Nasal Spray  
D. Nauzene  
E. I do not know

3. A woman approaches the counter looking for a recommendation for something that she can take safely for constipation during pregnancy. She brings four options to the counter. Which of these products would you recommend for constipation while pregnant?

A. Mineral Citrate  
B. Simethicone  
C. Docusate  
D. Mineral Oil  
E. I do not know

4. An older woman approaches the counter looking for a recommendation for something that her 2-year-old granddaughter who is experiencing a fever. She brings four options to the counter. Which of these products would you recommend for a fever for a 2-year-old?

A. Tylenol Extra Strength  
B. Aspirin  
C. Ibuprofen  
D. Naproxen  
E. I do not know

5. A gentleman approaches the counter looking for a recommendation for nausea that his pregnant wife is experiencing. He brings four options to the counter. Which of these products would you recommend for nausea for a pregnant woman?

A. Bismuth Subsalicylate  
B. Omeprazole  
C. Pramoxine  
D. Pyridoxine  
E. I do not know

6. A woman brings her two-year-old child to the counter, looking for a recommendation for a stuffy nose. She brings four options to the counter. Which of these products would you recommend for a stuffy nose for a two-year-old?

A. Triamcinolone Nasal Spray  
B. Rhinocort Nasal Spray  
C. Flonase Nasal Spray  
D. I do not know

7. A woman approaches the counter looking for a recommendation for something she can take for her sore back while pregnant. She brings four options to the counter. Which of these products is an appropriate recommendation for pain during pregnancy?

A. Excedrin  
B. Ibuprofen  
C. Tylenol  
D. Naproxen  
E. I do not know

8. A gentleman approaches the counter looking for a recommendation for a cough for his two-year-old. He brings four options to the counter. Which of these products is an appropriate recommendation for a cough for a two-year-old?

A. Honey  
B. Guaifenesin  
C. Dextromethorphan  
D. Chloraseptic  
E. I do not know

9. A woman approaches the counter looking for a recommendation for something that she can take for fever, body aches, and a runny nose while pregnant. She brings four combination products to the counter. Which of these products is safe for the above symptoms during pregnancy?

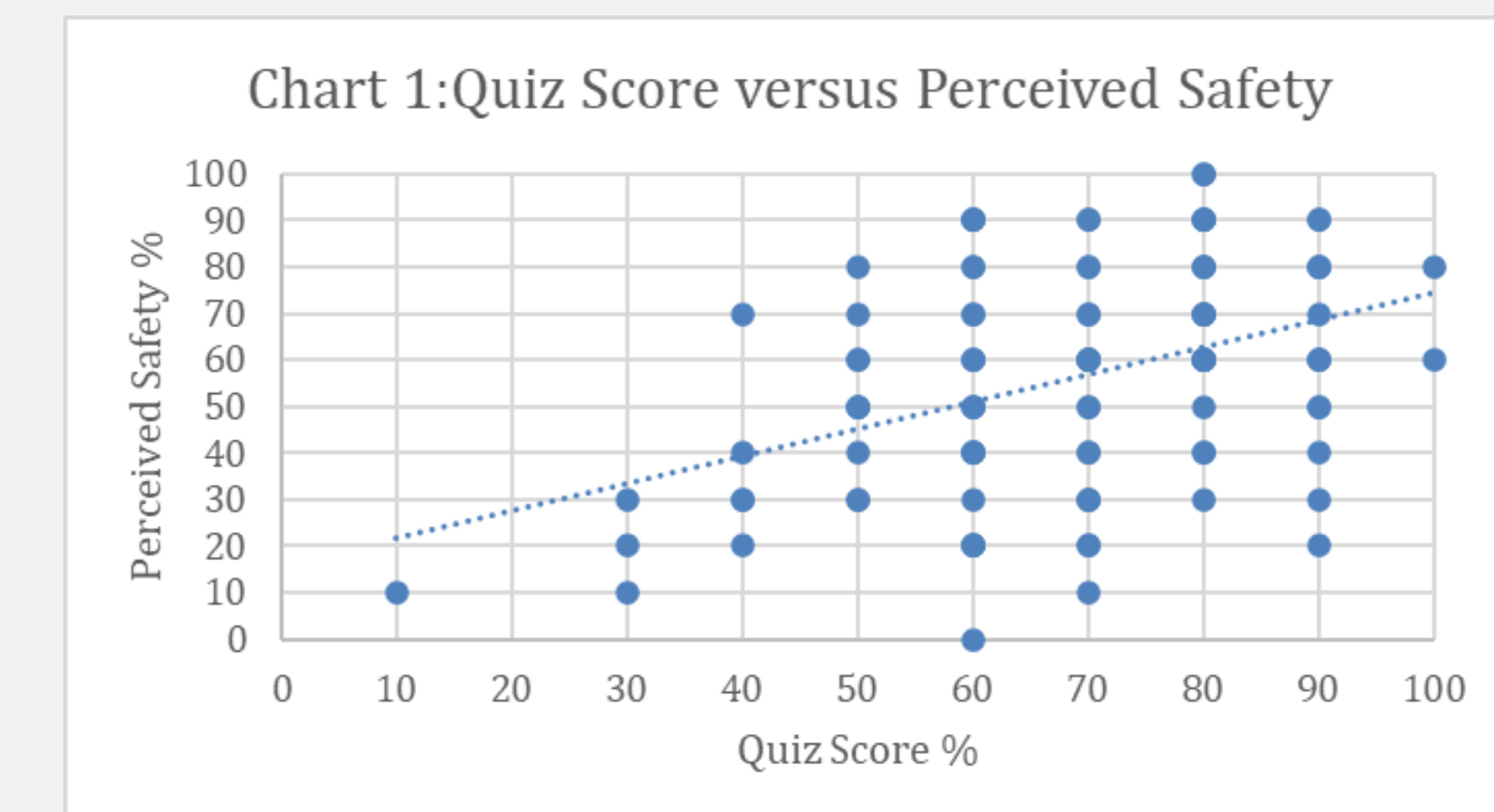
A. Alka Seltzer Plus  
B. Corticidin HBP  
C. Theraflu  
D. Mucinex Fast Max  
E. I do not know

10. A gentleman approaches the counter looking for a recommendation for his six-year-old for allergies. He brings four options to the counter. Which of these medications is an appropriate recommendation for allergies for a six-year-old?

A. Loratadine  
B. Excedrin  
C. Primatene  
D. Aleve D  
E. I do not know

## RESULTS

Chart 1: Quiz Score versus Perceived Safety. Shows the percentage of cases answered correctly on the quiz, compared to the percentage of recommendations that the pharmacist felt were safe.



- Mean score on the quiz: 68% ± 16.7
- Mean perceived safe recommendations: 55.7% ± 23.9
- Mean difference between score and safety: 20.2% ± 15.6

Chart 4: Comfortability of Recommending OTC Items. Shows the percentage of pharmacists whose response fell into each category for level of comfort in recommending OTC items.

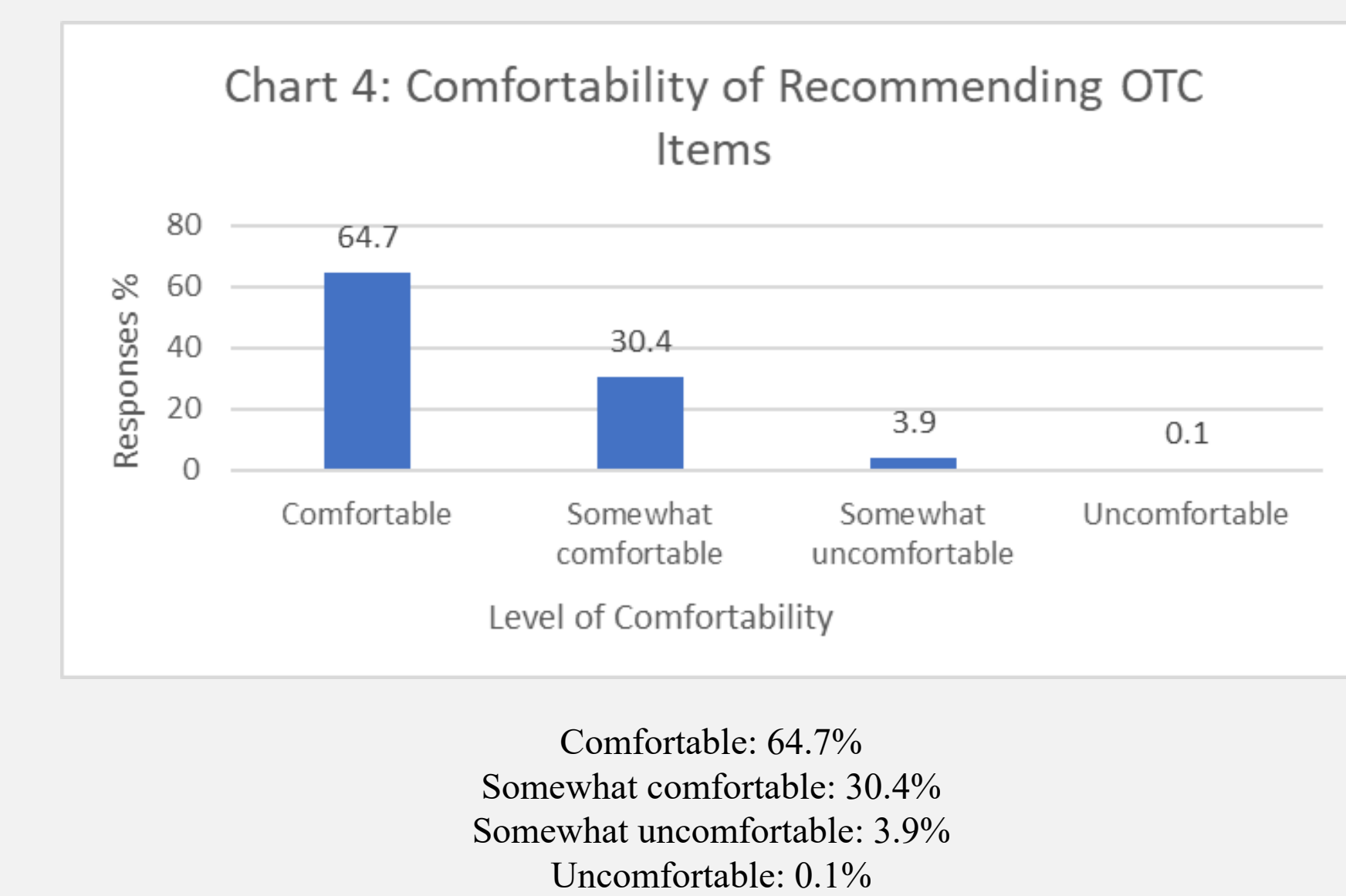
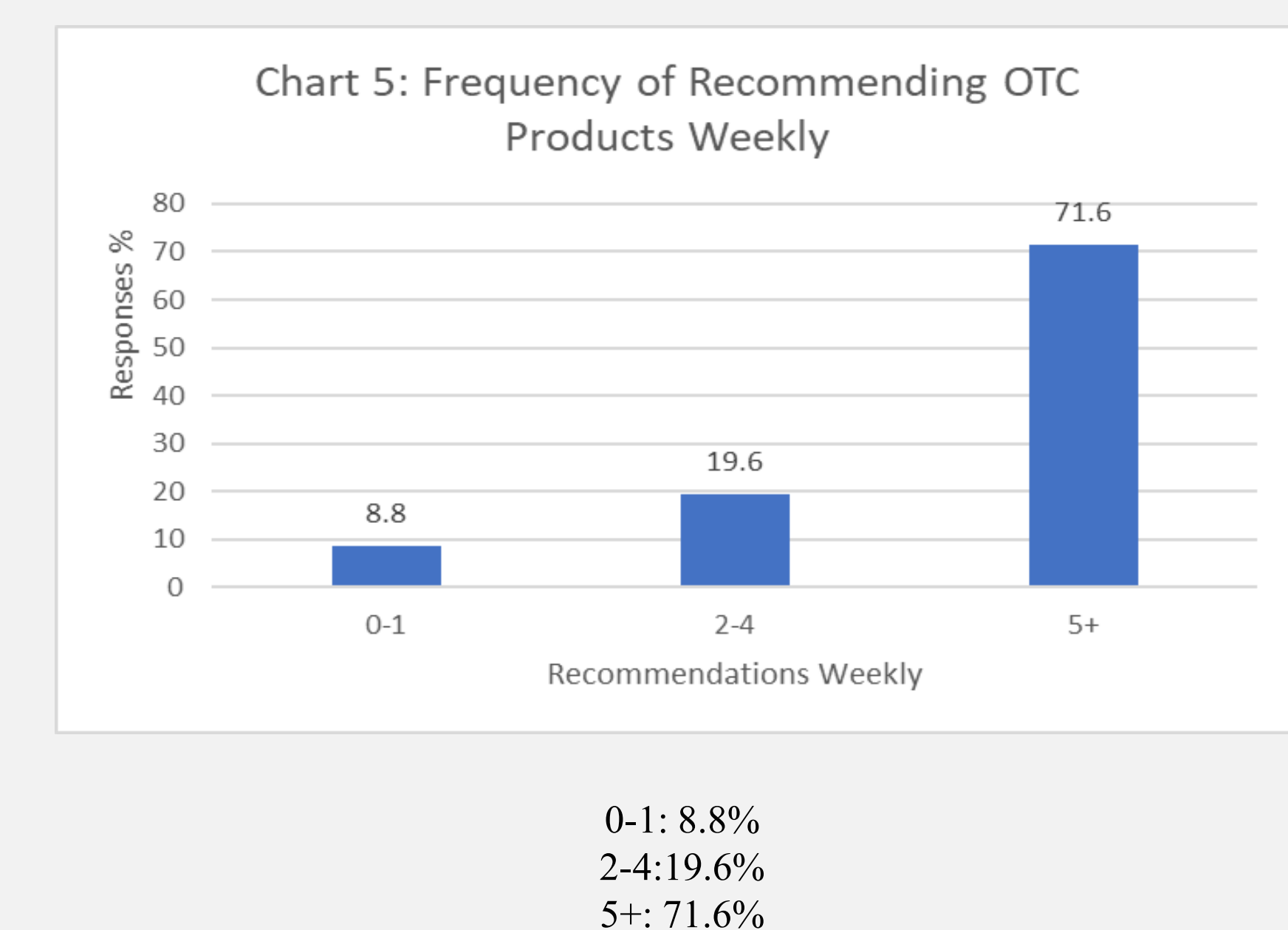


Chart Five: Frequency of Recommending OTC Products Weekly. Shows the percentage of pharmacists responding to the survey that recommend the amount of OTC products listed in various categories.



## CONCLUSION

- Many pharmacists perceived that their recommendations were safer than they actually were or were not confident in their ability to recommend a product that they perceived as safe.
- The patients focused on in this study are some of our most vulnerable populations of patients, and this gap in knowledge versus perceived safety could lead to potentially irreversible harm.
- There is overlap between pharmacists that are uncomfortable recommending OTC products and those who are recommending more than 5 OTC products every week.
- Additional education is needed on safety updates for OTC items, either through yearly required CE or monthly safety updates.